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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): 32286-191984

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on _____

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Application Number	Filed
10/662,877	16 SEPT 2003

First Named Inventor: Richard J. Whitbourne

Art Unit	Examiner
3731	Uyen T. Ho

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- [ ] applicant/inventor.
- [ ] assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- [X] attorney or agent of record. Registration number 42,256
- [ ] attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Signature

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Typed or printed name

202.344.8164
Telephone number

March 19, 2007
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

- [ ] *Total of _____ forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Richard J. WHITBOURNE *et al.*	Docket No.: 32286-191984
Application No.: 10/662,877	Confirmation No.: 1150
Filed: September 16, 2003	Art Unit: 3731
For: MEDICATED STENT HAVING MULTI-LAYER POLYMER COATING	Examiner: Uyen T. Ho

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

Claims 1-47 and 49-52 of the above-identified application have been finally rejected in the U.S. Patent and Trademark Office Action of September 18, 2006 ("2006 Action") and subsequently in the March 14, 2007 Advisory Action Before the Filing of an Appeal Brief ("2007 Advisory"). This Pre-Appeal Brief Request for Review of the above-identified application, filed with form PTO/SB/33 and a Notice of Appeal, pursuant to "New Pre-Appeal Brief Conference Pilot Program" (1296 Off. Gaz. Pat. Office 67 (July 12, 2005)) and "Extension of the Pilot Pre-Appeal Brief Conference Program" (1303 Off. Gaz. Pat. Office 21 (February 7, 2006)), presents Applicants' arguments for the allowability of the pending claims. Please charge the Notice of Appeal fee of $500.00 and any additional fees necessary to our Deposit Account No. 22-0261.

Rejection of 1, 3-13, 15-29, 31-39, 42, 46, and 47-52 over Pacetti '662

The Examiner has rejected claims 1, 3-13, 15-29, 31-39, 42, 46, and 47-52, under 35 U.S.C. §102(e) as being unpatentable over Pacetti (US 6,663,662).

The present invention as set forth in independent claim 1 is directed to a stent having a coating comprising: (a) a primer layer of two or more polymers, and (b) an outermost drug reservoir layer of (i) two or more polymers comprising a drug stabilizing polymer and (ii) one or more active agents; the primer layer polymers being distinct from the drug reservoir layer polymers.

The outermost drug reservoir layer protects and stabilizes the one or more active agents during sterilization and storage. The outermost drug reservoir layer allows sufficient adhesion and

flexibility to remain intact upon stent expansion and during a sustained period thereafter, release of efficacious amounts of the active agent at the site of stent expansion.

The present claims are not anticipated by Pacetti because the stent of Pacetti is both structurally and functionally different from the stent of the present system. Pacetti does not teach or disclose the following structures:

- a drug reservoir/release layer that achieves delayed release without a diffusion barrier covering it;
- an outermost layer comprising active agents;
- an outermost drug reservoir/release layer comprising two or more polymers; and
- a primer layer with distinct polymers from the drug reservoir layer polymers.

The present invention is quite distinct because it achieves controlled release by having two or more polymers in the outermost drug-containing layer rather than having a drug containing cavity or layer covered by an outermost drug free diffusion barrier as in Pacetti.

The Diffusion Barrier of Pacetti

The Examiner apparently mistakenly reads Pacetti as teaching a single controlled release outermost drug reservoir layer of two or more polymers as in the claimed invention. This is inconsistent with the Examiner's description of Pacetti as disclosing "an outermost drug reservoir layer comprising layers 34 and 28 (col. 8, line 45 to col. 15, line 46)." As admitted by the Examiner, Pacetti teaches two separate layers 34 and 28, not a single layer. The Examiner also contends that the "claim limitations does not exclude the drug reservoir from having a diffusion layer." The Examiner is wrong. The controlled release outermost drug reservoir layer of two or more polymers of the present invention is by definition, an outermost layer. Therefore, the claimed limitations do exclude the drug reservoir layer from having a diffusion layer covering the outermost layer.

Pacetti requires a diffusion barrier or coating for an implantable medical device, such as a stent, for *inhibiting or reducing* the rate of release of an active ingredient carried by the device. Pacetti teaches a drug release system having an outer diffusion (barrier) layer (28), which controls drug release and does *not* contain an active agent. Pacetti requires the outermost diffusion layer to

either cover (a) cavities that contain an active ingredient or, (b) optionally an inner drug reservoir layer (34).

This is quite different from the present invention that requires an outermost controlled release drug reservoir layer of two or more polymers.

The stent of Pacetti is therefore structurally different from the present invention. The structure of Pacetti results in a device in which drug release from the inner drug reservoir layer is controlled by the outer diffusion layer. In contrast, the outermost drug reservoir/release layer of two or more polymers of the present invention controls drug release.

Two or More Polymers

Nowhere in Pacetti is it taught that the reservoir layer should comprise two or more polymers, as set forth in the present invention. Throughout the description of Pacetti, e.g., column 8, lines 50-53, column 11, lines 65 - column 12, line 2, and all the Examples, the use of only one polymer in the drug reservoir layer is taught. In fact, Pacetti does not need to have such two or more polymer combinations because the elution rate is controlled by the diffusion barrier.

The present invention is not anticipated by Pacetti, because Pacetti does not teach or disclose or suggest an outermost drug reservoir/release layer comprising two or more polymers as in the present invention.

As set forth in the claims and the description of the present application, e.g., paragraph 16, the inventive coatings use a system with two or more polymers (e.g., a hydrophilic and a hydrophobic polymer), which allows outstanding adhesion to substrates and the flexibility to meet the demanding requirements of vascular stents. The use of two or more polymers (e.g., hybrid coatings) creates a drug delivery layer which permits the loading and elution control of virtually any drug or combination of drugs from the surface of a stent. The inventive hybrid polymer binder controls the drug elution rate by using, e.g., various ratios of hydrophilic polymer to hydrophobic polymer, the combination stabilizing the drug during manufacturing, sterilization, and deployment of the stent.

In contrast and as set forth in paragraph 14, prior coatings have inferior adhesion and flexibility during stent expansion because they are based on applying the drug(s) without a polymer binder system as set forth by the present invention, e.g., two or more polymers, but instead over-coating it with a separate covering layer, e.g., the diffusion layer of Pacetti, which controls the drug

elution rate by using a covering that have physical porosity that must be carefully controlled in order to control the drug elution rate(s).

A Primer Layer Having Polymers Distinct from the Outermost Drug Reservoir Layer

Independent claims 1 and 47 require a primer layer having polymers distinct from the polymers of the outermost drug reservoir layer.

Pacetti teaches that, if an optional primer layer is used, then the choice of polymer can be the same as the drug reservoir layer in order to significantly reduce or eliminate any interfacial incompatibilities, such as lack of adhesive tie or bond, which may exist with the employment of two different polymeric layers (column 12, lines 55-63; column 13, lines 40-45 and Examples). Pacetti does not teach or disclose a coating system with primer layer polymers being distinct from the drug reservoir layer polymers, as set forth in the present claims, and in fact teaches the opposite.

The Examiner erroneously reads the differences between lists of primer polymers and drug reservoir polymers in Pacetti at col. 4, line 39 to col. 8, line 44 and col. 8, line 45 to col. 15, line 46, respectively, as teaching use of different polymers in these layers. This is incorrect because each layer is optional, and can be used without the other, according to Pacetti. If both layers are used, then the polymer in each is taught to be the same. Pacetti does not teach or disclose the use of different polymers in the primer layer and drug reservoir layer.

In summary, claims 1 and 47 are not anticipated under 35 U.S.C §102 because Pacetti does not teach or disclose a stent having a coating comprising (a) a primer layer of two or more polymers, and (b) an outermost drug reservoir layer of two or more polymers comprising a drug stabilizing polymer, the primer layer polymers being distinct from the drug reservoir layer polymers, as set forth by the present invention.

Therefore, Pacetti does not anticipate independent claim 1 and its dependent claims 3-13, 15-29, 31-39, 42, 46, and 49-52, and independent claim 47, and the rejection should be withdrawn.

Rejection of 2, 14 and 30 over Pacetti '662

The Examiner has rejected claims 2, 14, and 30, under 35 U.S.C. §103(a), as being unpatentable over Pacetti (US 6,663,662). The Examiner asserts that the intermediate layer of claims 2, 14 and 30, and the type of the ethylene acrylic acid copolymer or the polyurethane used in claims 40, 41, and 43-45, are well known in the art.

Claims 2, 14, 30, 40, 41, and 43-45 are dependent from and therefore include all the limitations of claim 1. These claims, as discussed above for claim 1, are structurally and functionally different from Pacetti. Pacetti does not disclose, teach or suggest a stent having a coating comprising an outermost controlled release drug reservoir layer of two or more polymers comprising a drug stabilizing polymer, as set forth by the present invention. In fact, Pacetti teaches away from the present invention by requiring an outermost diffusion layer.

The Examiner has provided no indication that these claim elements are disclosed or made obvious by Pacetti and has failed to present a *prima facie* case of obviousness. So the rejection should be withdrawn. Therefore, dependent claims 2, 14, 30, 40, 41, and 43-45 are not obvious under 35 U.S.C. §103 over Pacetti and the rejection should be withdrawn.

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Respectfully submitted,

Date: March 19, 2007

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